Claims

1. A method of sending first and second signals to a plurality of user equipments, the method comprising the steps of:

   - providing of a dedicated channel for each one of the plurality of user equipments,
   - providing of a code-multiplexed shared channel for the plurality of user equipments,
   - assigning of an antenna of a set of antennas to each one of the user equipments,
   - sending of one of the first signals to one of the plurality of user equipments on one of the dedicated channels on a carrier frequency by applying transmit diversity,
   - sending of one of the second signals to one of the plurality of user equipments on the code-multiplexed shared channel on the carrier frequency by applying multi-user diversity.

2. The method of claim 1, the dedicated channel being DPCH type channel and the code-multiplexed shared channel being a HS-DSCH type channel of a HSDPA type system.

3. The method of claim 1, further comprising the steps of:

   - assigning a carrier frequency of a set of at least first and second carrier frequencies to each one of the dedicated channels,
   - assigning of a carrier frequency of the set of carrier frequencies to each one of the user equipments.

4. The method of claim 3, further comprising applying transmit diversity for sending of the one of the second signals.

5. The method of claim 4, whereby closed loop transmit diversity is applied.

6. A computer program product, such as a digital storage medium, comprising program means for sending of first and second signals to a plurality of user equipments, the program means being adapted to perform the steps of:

- providing of a dedicated channel for each one of the plurality of user equipments,
- providing of a code-multiplexed shared channel for the plurality of user equipments,
- assigning of an antenna of a set of antennas to each one of the user equipments,
- sending of one of the first signals to one of the plurality of user equipments on one of the dedicated channels on a carrier frequency by applying transmit diversity,
- sending of one of the second signals to one of the plurality of user equipments on the code-multiplexed shared channel on the carrier frequency by applying multi-user diversity.

7. A sender for sending of first and second signals to a plurality of user equipments, the sender comprising:

- a first component for providing of a dedicated channel for each one of the plurality of user equipments,
- a second component for providing of a code-multiplexed shared channel for the plurality of user equipments,
- a third component for assigning of an antenna of a set of antennas to each one of the user equipments,

- a forth component for sending of one of the first signals to one of the plurality of user equipments on one of the dedicated channels on a carrier frequency by applying transmit diversity,

- a fifth component for sending of one of the second signals to one of the plurality of user equipments on the code-multiplexed shared channel on the carrier frequency by applying multi-user diversity.

8. The sender of claim 7 further comprising scheduler means for providing the multi-user diversity.

9. The sender of claim 7 further comprising:

- means for assigning a carrier frequency of a set of at least first and second carrier frequencies to each one of the dedicated channels,

- means for assigning of a carrier frequency of a set of carrier frequencies to each one of the user equipments.

10. A telecommunication system for sending first and second signals to a plurality of user equipments, the telecommunication system comprising:

- a first component for providing of a dedicated channel for each one of the plurality of user equipments,

- a second component for providing of a code-multiplexed shared channel for the plurality of user equipments,

- a third component for assigning of an antenna of a set of antennas to each one of the user equipments,

- a forth component for sending of one of the first signals to one of the plurality of user equipments on one of the dedicated channels on a carrier frequency by applying transmit diversity,

- a fifth component for sending of one of the second signals to one of the plurality of user equipments on the code-multiplexed shared channel on the carrier frequency by applying multi-user diversity.